



Describe in words and with math the pattern of

(a) the number of boxes (3 for fig 1)

Calc. routine

3 (E)

Ans + 2 (E)

# boxes increases by 2  $\rightarrow$  1 each side

$$X = Y + 2$$

$X$  = next # boxes

$Y$  = previous # boxes

recursive equation

$$Y = 1 + 2X$$

$X$  = fig. #

$Y$  = # boxes

explicit equation

(b) the number of segments (10 for fig 1)

$\Rightarrow$  3 seg. each side, 6 total

recursive equation

$$Y = X + 6$$

$Y$  = next

$X$  = previous

explicit

$$Y = 6X + 4$$

$X$  = fig #

$Y$  = # segments

(c) the perimeter (8 for fig 1)

recursive eq.

$$Y = X + 4$$

$Y$  = next

$X$  = previous

Find fig. 10 for a-c

Fill in the blanks then

Write recursive equations for each pattern using

$y = \text{next}$  and  $x = \text{previous}$

Calc.

7(E)

Ans + 5(E)

① 7, 12, 17, 22, 27, 32, 37, 42, 47, 52  $y = x + 5$

② 5, 1, -3, -7, -11, -15, -19, -23, -27, -31  $y = x - 4$

③ -7, —, -29, —, -51, -62, —, -84, —

④ 2, -4, 8, -16, 32, —, 128, -256, —, —

4.2 #3, 4, 15, 16

By end of class

HW

sect. 4.3 #1, 3, 5, 6, 9